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Impact Study Regarding Constructivist Curriculum's Management of Teacher Training

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Abstract

The basis of this study consists in the supposition that a methodological model concerning the curriculum's management of teacher training will have superior results in comparison with current models and practices, if built in the spirit of pedagogic constructivism, adapted to curricular and institutional context and achieves students' adhesion. The first two conditions laid down are revealed through the model of constructivist curriculum of teacher training (Bunăiașu, 2008). Our study is based on a brief presentation of the model's structure, methodology (questionnaire of testing the managerial model's impact) and results of the impact study, which testify the adhesion of subjects.

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1. Introduction

Curriculum's management of teacher training represents a paradigm guided by the necessity in order to ensure rationality and responsibility as part of the stage of professionalization for the didactic career, which involves a multilateral conceptual analysis, regarding:

- the structural plan, consisting in an ensemble of principles, strategies, methodological and procedural systems, designed and coordinated so as to facilitate the high-standards-of-performance accomplishment of purposes belonging to programs of psycho-pedagogic training and to guarantee the evaluation and acknowledgment of their results;
- from a procedural point of view, the processes' unitary system of multidimensional curricular analysis (curriculum's audit of teacher training, analysis of educational needs, analysis of resources required),

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planning, implementation, monitoring, evaluation and revision of teachers' initial training policies, of projects/programs' training curriculum, involving managerial roles and attributions.

The managerial model of teacher training constructivist curriculum has been applied as part of the FPPC Project (Constructivist teacher's pedagogic training), experienced and validated as part of a research grant, whose final form constituted the object of our impact study. The synthesized structure of the model is (Bunăiașu, 2008):

I. The structural perspective, which indicates the curriculum's unity and complexity in FPPC. From this perspective, the curriculum's management acquires an integrative aspect, resulting:

a) Management of constructivist purposes, specific to teachers' pedagogic training, consisting in: analyzing general purposes of pre-University education system; analyzing general and specific competences formulated in curricular documents, relative to the study of disciplines as part of the program of psycho-pedagogic training; creating hypotheses of solving inconsistencies between official curricula and European dimension of teachers' pedagogic training; delineating a profile of competence of the constructivist teacher; defining general purposes of the cognitive constructivist training, as far as competences, capacities and abilities;

b) Management of curricular contents involves curricular decisions of constructivist teacher, regarding selection, processing, adaption, coming to the point as far as workloads are concerned, so as to capitalize and facilitate teaching experiences, which lead to accomplishing cognitive and constructivist purposes.

c) Management of constructivist training strategies consists in activities of conceiving, planning, application, evaluation, reconsideration, optimization of training models and constructivist methodology: strategies, models, methods that capitalize constructivist learning's essence through research; strategies, models, methods delineated on stages of building knowledge process; strategies, models, methods that explicitly capitalize teaching's internal conditions (Joița, 2006, 138, Wilson, B.G., Lowry, M., 2000, Schott, M, 2001)".

d) Management of constructivist evaluation, focused on: settling criterions of constructivist evaluation and alternative methodology of evaluation – as solution to traditional evaluation's lacks, to evaluation of "shaping for cognition and science; monitoring the deployment of tools and their reconstruction, of techniques of constructivist evaluation.

II. Procedural perspective, which specifies the curriculum's context and dynamic in FPPC, as follows:

a) students' analysis of educational needs;

b) constructivist curriculum's planning of teacher's pedagogic training, based on settling the finalities pursued through curricular development constructivist in respect, constructivist curricular programs, teaching situations through models of constructivist planning;

c) deployment management of constructivist curriculum of teachers' pedagogic training, including: monitoring purposes of communication, motivation and interlocking persons involved in curricular development; managing difficulties, blocks occurred in ongoing curricular programs, by making operational decisions in order to redress, ameliorate; monitoring students' involvement in curricular constructions of their own training; cross-curricular coordination, regarding the insurance of curricular elements' coherence.

d) evaluation of teachers' training curriculum, also accomplished in a constructivist way, as evaluation of competences, capacities and abilities, from the following perspectives: evaluation in order to optimize the process of curricular development; prevalence of formative, situational, transactional evaluation; focusing the curricular project's evaluation on value-added, in accordance with the curricular innovations it offers.

2. Purpose of study and objectives

The purposes pursued as part of empiric research activity, which have guided methodology's elaboration and application, are: *a) analysis of subjects' optics regarding the necessity and principles of conceiving managerial models in the field of teacher training curriculum, from a constructivist perspective;* *b) studying subjects'*

perceptions and opinions, regarding the methodological model invoked, of constructivist curriculum's management of teachers' training and their development possibilities.

The general hypothesis of impact study, which has been developed on managerial model's conceiving premises, is: *If the methodological model of teacher training constructivist curriculum has a multidimensional structure and multifunctional character as part of the psycho-pedagogic training program, then it can be achieved the adhesion of students, specialists in education, University didactic staff, Pre-University representatives, with effects expected to optimize the training processes.*

Given this general hypothesis, we have derived the following particular assumptions: 1) *If the methodological model's structure has a consistent legislative and theoretical-methodological support, then it is appropriate for postmodern education, actual system and planned changes as far as teachers' training is concerned;* 2) *If the methodological model has elements that ensure its operational character, feasibility and flexibility, then it is able to generate good educational practices in the system of teacher training, from a constructivist perspective.*

The criteria to which we have referred while testing the particular assumptions, analyzing and interpreting data, are: 1) methodological model's multidimensional structure (in order to test the first particular hypothesis) and 2) methodological model's practicability (in order to test the second particular hypothesis).

Table 1. Criteria and indicators in order to validate the hypothesis

Criterion no.1: Methodological model's multidimensional structure:		Criterion no.2: Practicability of methodological model:	
Indicator 1.1. methodological model's legislative premises		Indicator 2.1. operational character of methodological model	
Indicator 1.2. theoretical-methodological premises of the model		Indicator 2.2. model's feasibility	
Indicator 1.3. structural perspective of methodological model		Indicator 2.3. model's flexibility	

3. Methodology

The type of research undertaken and the premise in order to ensure representativeness have determined us to make use of the mixed method of sampling, by combining probabilistic selection with the rational one, by using descending selection technique. In order to ensure the representativeness of more socio-professional categories of subjects as part of the sampling, we have appealed to more variables of sampling: academic specialization, age, sex. Thus and so, we have selected a sampling of 200 subjects, structured on the following categories: 100 students attending the program of psycho-pedagogic training, both first and second level, belonging to more specializations as part of University of Craiova (65% students attending the program's first level of psycho-pedagogic training and 35 % students attending the second one); 60 persons belonging to University didactic staff (60% specialists in Educational Sciences – teachers teaching Pedagogy, Psychology, Specialty didactics and 40% persons belonging to University didactic staff of other specialties cadre); 40 representatives of pre-University education (school inspectors, school managers, didactic staff). As far as subjects' distribution on sex and age indicators is regarded, sampling's structure is: 60 % female subjects and 40% male subjects; 18-25 years (35%), 25-35 years (25%), 35-45 years (25%), over 45 years (15%).

The main research method used as part of our investigative approach is the questionnaire, built based on variables that operates particular hypothesis. Items analysis revealed a *Cronbach's alfa coefficient* with the value of 0.82, which validates the questionnaire from the internal consistency and fidelity point of view. Thus and so, evaluation questionnaire of methodological model's impact is structured on more categories of items, which approach more sub-themes: the necessity and opportunity of teachers' training from a constructivist perspective (items 3-4) ; the design principles of managerial models in the field constructivist curriculum of teachers' training (items 5-6) ; the premises of methodological model (items 7-8); the structure of methodological model (items 9-16); the conditions that ensure methodological model's value-added as part of the professional training plan:

operational character, feasibility, flexibility (items 17 -21). In this respect, we exemplify by using items regarding the structural perspective of the methodological model, where we got scores more favorable to the model: a) item 10: Indicate the measure by which you agree that the methodological model's objectives are relevant for the reform of the teachers' education process at European level; b) item 14: By which measure you appreciate that previous constructivist strategies are more efficient than the current ones in the field of teacher training ?

Overall methodological model and its structural elements represent research's independent variables, which determine the dependent variables we have foresaw as part of the investigative approach's planning stage (subjects' favorable opinions regarding conceiving premises, multidimensional structure and functionality of methodological model, subjects' curricular conceptions. As intermediary variables, we have settled the legislative context of teachers training system, marked by inconsistency. The questionnaire has been applied directly, face-to-face, as part of didactic activities in respect of students, and through actions organized to this effect in respect of University didactic staff and pre-University representatives.

For the graphic representation and statistic processing of results, we have used table of results, diagrams, histograms and *statistic comparison of differences significance of some qualitative characteristics* (by calculating the value of T, of significance of percentage differences).

4. Results

The quantitative analysis of subjects' favorable answers (by accumulating those distributed on „to a large extent” and „to a small extent” assessment scales, regarding the legislative and theroetical-methodological support and managerial model's structure of teacher training constructivist curriculum is synthesized through the following percentage data: 1) regarding *the premises of methodological model* indicator: students - 58%, University didactic staff - 71%, pre-University didactic staff – 57,5%; 2) regarding *the structural perspective of methodological model* indicator: students - 67%, University didactic staff – 81,5%, pre-University didactic staff – 72,5%; 3) regarding *the procedural perspective* indicator: students – 72%, University didactic staff – 76,6%, pre-University didactic staff – 62,5%. These data are enforced by subjects' answers to items with open questions, where there are brought arguments concerning the intensity of assessments indicated to items with assessment scales. The large share of answers favorable to conceiving principles, premises and methodological model's multidimensional structure of teachers training constructivist curriculum's management validate the first particular hypothesis of our investigative approach. Thus, subjects assess that methodological model is supported by principles and premises that determine its structure and functionality.

The statistic processing of subjects' favorable answers (achieved the same way as those corresponding to the first criterion) is synthesized through the following data: 1) regarding *the methodological model's operational character* indicator: students - 62%; University didactic staff - 75%; pre-University didactic staff – 52,5%; 2) regarding *the model's feasibility* indicator: students – 58 %; University didactic staff – 76,66 %; pre-University didactic staff – 42,5%.

Table 2. The statistic comparison regarding the percentage differences' significance of categories of subjects, concerning indicators that validate methodological model's applicative character

Variables	Value of T		Significance	
	Univ. didactic staff- students		Univ. didactic staff – pre- Univ. didactic staff.	
Operational character	-1,62	NS	-2,25	p<0,05
Feasibility	- 2,29	p<0,05	-3,46	p<0,01

The significant differences recorded between answers of categories of subjects can be interpreted with reference to pedagogic culture generally, to their expectances regarding reformation of didactic staff's initial and continual training system, to their capacities in order to analyze, evaluate a generic methodological model or in the curricular field. From this perspective, University didactic staff manifests competences of analysis and evaluation of a methodological model, developed at a higher level.

The large share of favorable answers, distributed on indicators of operational character, feasibility and flexibility of methodological model, validates the second particular hypothesis of empiric research. Thus, methodological model has achieved subjects' adhesion, as far as practicability is regarded.

5. Discussion

The analysis of the results achieved confirms research's general hypothesis, with respect to the fact that methodological model of teachers training constructivist curriculum has achieved subjects' adhesion, by assessing the multidimensional and multifunctional character as part of the program of psycho-pedagogic training, with effects foreseen in optimizing the training processes.

Our investigation's process, carried on in accordance with the rigors of scientific research, the results achieved, which are adequate to theoretical framework and directions belonging to previous studies on topic of teachers training from a constructivist perspective, represent the research's strengths. As limits of the investigation, we specify the methodological model's test as part of the described context, just as a product, without having reliable date regarding effects of its deployment. Given these findings, we foresee few development directions of our investigative approach: methodological model's experimental validation, by applying it as referential as part of more specializations belonging to the program of psycho-pedagogic training, in order to extend the application area of constructivist models tested through the research grand deployed as part of University of Craiova; the study of its impact on a representative sample nationwide; the development of the questionnaire applied in research, in order to validate it as part of a methodological research, as a generic tool in impact studies deployed on methodological models in curricular field.

6. Conclusions

Teachers' training from a constructivist perspective represents a basic strategy in reformation of curricular process of psycho-pedagogic training programs, with results foreseen having a greater professional impact than that of current practices. From this perspective, organizing applicative researches in this field has the role of delineating strategies, curricular methodologies and programs based on constructivist theory, in order to highlight the necessity and opportunity of constructivist paradigm as part of teachers' training and to generate measures of improvement and support at the level of decisional factors.

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